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May 17, 2000

Ms. Magalie Roman Salas
Secretary
Federal Communications Commission
445 12th Street, SW Rm. TW-B204
Washington, DC 20554

Re: Comments in
MM Docket No. 00-39

Dear Ms. Salas:

Enclosed herewith are 10 copies (original plus nine) of my Comments on the Notice of Proposed Rule Making, MM Docket No. 00-39, In the Matter of Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television.

If there should be any questions, please do not hesitate to contact this office.

Sincerely,

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DGE:cc
Encl.

Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of

Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television	)))	*MM Docket No. 00-39*

COMMENTS ON
NOTICE OF PROPOSED RULE MAKING

Introduction

Donald G. Everist ("Everist"), a member of the firm of Cohen, Dippell and Everist, P.C., hereby submits the following comments on "Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television ("DTV Review NPRM")" adopted by the Federal Communications Commission ("FCC") March 6, 2000. Mr. Everist has practiced as a registered professional engineer in the District of Columbia (Registration No. 5714) on broadcasting matters for over thirty years and he is a member of the Institute of Electrical and Electronic Engineers, National Society of Professional Engineers, Illinois Society of Professional Engineers, and a member and past-president of the Association of Federal Communications Consulting Engineers.

He was the Chairman of the AM Broadcasting Service Working Group preparatory to the 1979 World Administrative Radio Conference and Industrial delegate for the United States to the

International Telecommunications Union Regional Administrative Medium Frequency Broadcasting Conference in Buenos Aires, Argentina. He was the Chairman of TF:F Planning Methods; was a U.S. delegate on the Fourth Panel of Experts meeting in Geneva, Switzerland; was Chairman of the Working Group on Inventories, Incompatibilities, Negotiations and Strategy to the Advisory Committee, all preparatory to the Second Session of the Regional Administrative MF Broadcasting Conference for Region 2 (Western Hemisphere) held in Rio de Janeiro, Brazil. He was an industrial delegate for the United States to the Regional Administrative Radio-Conference (BC-R21) sponsored by the International Telecommunications Union in Geneva, Switzerland. He was an industrial delegate for the United States for the CCIR Joint Interim Working Party 8-10/1 Meeting in Helsinki, Finland. He has served as a participant in various working groups in the development of digital television and in development of *Spectrum Monitoring Handbook.*

The FCC has requested comments on its first periodic review of the progress of the conversion from analog to digital television. The FCC notes in the DTV Review NPRM that the conversion is progressing and both the FCC and the television industry are working diligently to convert to digital television pursuant to the construction established in the *Fifth Report and Order*[1].

The current FCC processing system for DTV and NTSC stations face many areas whereby new policies need to be promptly established. The development of these policies is a necessary outgrowth of the introductions of a new service (DTV) while:

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[1] *Fifth Report and Order*, 12 FCC Rcd at 12856

1. Protecting the existing NTSC full-service with the ultimate reduction of off-the-air television spectrum,

2. The adoption of the so-called maximization application process in one of the reconsideration rounds,

3. The interfacing and effective coordination of bilateral arrangements with neighboring administrations,

4. The enactment of the Community Broadcasters Protection Act and,

5. The comprehensive and effective implementation of other rules adopted in MM Docket 00-10; ET Docket 93-62; WT Docket 95-5 and the Public Notice DA00-912 dated April 27, 2000 regarding September 1, 2000 deadline on radio frequency emissions.

It is timely that the FCC review its policies, procedures and solicit comment on a number of issues to further enhance the processing of DTV applications, foster policies that will permit the industry to make the necessary adjustments that will logically occur when implementation and commissioning of new DTV facilities. To do otherwise will add processing uncertainties which will impede the implementation of the DTV service to the public.

There continues to be a number of policy and engineering issues that materially arise in bringing into fruition a new wide area off-the-air "free" public service while protecting the current wide area off-the-air "free" public service. Clarification of those rules adopted in MM Docket No. 87-268[2] and subsequent items adopted by the FCC discussed above and effective development of FCC policies which would complement those rules are required. However, if left unaddressed, undeveloped or not resolved, will ultimately frustrate or transcend how the

[2]These also will directly impact the rules proposed in ET Docket No. 99-34 entitled, "In the Matter of an Industry Coordination Committee System for Broadcast Digital Television Service" adopted by the FCC on January 28, 1999.

industry provides a timely and seamless transition to digital off-the-air television that the general public expects.

For example, there are a number of processing issues that arise out of the enactment of the Community Broadcasters Protection Act[3] which if not promptly addressed will delay the stated goal.

Principal Community Contour

The FCC seeks comments on the establishment of a principal community contour. Without going into the merits of the establishment of such a contour, it is recommended, that if adopted, that it only be applied to DTV facilities for which application has been made beyond the 5 km site tolerance. The reason is that many DTV applications have been filed from the existing site whereby only the predicted 41 dBu (or equivalent contour) service will be achieved.

Definition of Non-Directional and Directional Transmitting Antenna

The FCC Form 301 III-D, Paragraphs 10 and 11 request information on the type of the DTV antenna and its performance characteristics. However, the FCC needs to define what constitutes a non-directional and directional antenna for the purpose of implementing DTV coverage and interference.

TV Data Base Inconsistencies

The hallmark of implementing a new service that is interleaved with the existing service is to validate the technical database that was used to perform the studies and make the DTV

[3]Community Broadcasters Protection Act of 1999 Public Law No. 106-113

assignments contained in Table B[4]. Further, it is mission critical that the new consolidated data base is validated. The first purpose is to resolve any inconsistencies which could not only hamper, but frustrate the processing of proposed DTV and NTSC facilities and the second is effective implementation of the technical new data base.

Elevation Data Base Inconsistencies

The FCC needs to determine its policy where elevation data for computing coverage and interference contours past or present are incorrect. This difficulty can manifest itself in various forms. For example, in the initial years of NTSC authorizations, the FCC accepted elevation data based upon the best available information. Often this data were from older U.S. Geological maps such as 1/250,000 scale U.S. Geological maps. In one instance, the FCC authorized a full service TV station in the 1950's using altimeter readings when other official elevation data were unavailable. That earlier elevation data is the basis of the current NTSC facility and proposed DTV coverage. Section 73.622 of the FCC Rules requires that if the DTV facility differs in over 10 meters in HAAT, it will be a non-checklist application. However, situations can arise whereby older authorizations could have its DTV facilities be a non-checklist application with these elevation data inconsistencies. For example, if the DTV facility is located on a new tower within 5 km and the new DTV site is based upon the latest available profile maps or 3-second data base, a flag can be introduced whereby the DTV facility which exceeds the 10 meter criteria would become a non-checklist application. This may be true even if both sites are based on the

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[4]"*Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Order,*" released December 18, 1998.

latest elevation data. There are areas of the United States where the computerized database is not correct. The FCC should clarify all situations where inaccurate elevation or other data leads to unintended consequences. Furthermore, it is requested that the FCC clarify how these computer data base elevation inconsistencies should be resolved and, where necessary, the final elevation data be abstracted from the latest U.S. Geological quadrangles.

Another issue arises if more refined and recognized computerized elevation data are available, how and under what circumstances will the FCC permit this data to be used for technical analysis?

DTV and NTSC Frequency Change Requests

There is uncertainty how and when the FCC will process DTV or NTSC frequency change requests. To date, to my knowledge, not one Report and Order has been issued for channel changes for digital contained in Section 73.622 of the FCC Rules. One uncertainty is how the Petition for Rule Making will be subject to competing applications once the Notice of Proposed Rule Making is issued. This, in addition to domestic considerations, is particularly important along border areas if a non-domestic station[5] or interests are permitted to intervene. Furthermore, the FCC may wish to consider notifying a frequency change of the affected administration in the coordination zone prior to issuance of the Notice of Proposed Rule Making. The FCC should clarify whether and application to be filed for a facility within the coordination

[5]KTLA, Inc. Application for Experimental Authorization (FCC File No. BPEXT-960829KE.

zone of a bilateral understanding or agreement should supply special detailed allocation studies. If so, what technical studies are to be provided?

Population Data

The FCC based its population data on 1990 Bureau of the Census data. The FCC should consider whether or not to permit the introduction of updated Census Bureau population estimates. Determinations made in Table B in rapid population growth areas could be decisional when DTV and NTSC modifications are required. Clarification is sought as to whether the FCC will permit on a routine basis updated population and if so under what conditions or circumstances.

Creation of White or Underserved Areas

There may be situations that arise whereby incremental interference to NTSC stations by DTV stations may result in the creation of no service or underserved areas. The Commission raises the companion issue when the DTV transmitter site is moved and replication is not achieved. Currently, FCC policy will not permit a network NTSC station to move transmitter sites or reduce effective radiated power if it results in a loss of network service. This same loss of service could arise from incremental interference to NTSC stations from DTV maximization requests. Clarification of this FCC policy is requested.

Maximization

In the *Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Order*, released December 18, 1998 ("Second MO&O") the FCC adopted a procedure whereby a DTV station which requests maximization of ERP up to 1000 kW, then all

other DTV stations listed in Table B with less than a 200 kW DTV power are to be studied at 200 kW. First, clarification is sought whether for maximization which stations should be considered non-directional so that true maximization can be achieved. Secondly, clarification is sought and to which station's interference component should be studied first and then be added to the total and under what circumstances.

Further, clarification is sought how and when does the term maximization apply? For example, only for UHF stations or a UHF DTV station authorized equal to or less than 200 kW, but applies for a DTV value greater than 200 kW, say 210 kW or 300 kW ND or DA? Is maximization framed in terms of the predicted 41 dBu; the population and/or areas served by using Longley-Rice analysis methodology or other? Does it apply to DTV filings during the transition or can it apply to post transition filings? How is maximization defined for DTV facilities assigned in Table B which seek an increase in DTV facilities, but not above 200 kW? What about a slight increase in ERP on VHF or UHF above the Table B value in order to accommodate the assigned directional pattern? All of these need clear and concise definition.

Application Evaluation and Mutually Exclusive Applications DTV-DTV and DTV-NTSC

The FCC has correctly identified that further examination of DTV application processing procedures is warranted.

Several Important Issues Arise

It suggests several alternatives all of which are dependent on an evaluation tool.

First Issue–Evaluation of Application

Since the adoption of the analysis criteria in Section 73.623 of the FCC Rules and the publication of OET Bulletin 69, the Commission taken several very dramatic steps. The first is the conversion of its technical data base to a Consolidated Data Base System. The second is the adoption of MM Docket No. 00-10 which authorizes protection to certain LPTV stations that qualify as a Class A station. The evaluation task is monumental to implement a new off-the-air DTV service; maintain an existing off-the-air NTSC service; permit changes in NTSC facilities as well as DTV maximization requests filed by May 1, 2000; permit the filing for changes to pending new NTSC applications and an allotment; petitions for new analog TV stations[6] and the scheduling of limited low power television/television translator/Class A window.[7]

In order to provide a common analysis base from which common understandings and evaluations can result, it is crucial that the FCC immediately release all software to the public that it uses in its evaluation procedures.

While it is recognized that any software in this dynamic process will have its limitations, and will be undergoing revisions, nevertheless, routine evaluation using common software will reduce the chance for confusion resulting from slightly differing evaluation mechanisms.

Second Issue–Competing Applications

As the FCC notes, commercial television stations were to have filed applications by November 1, 1999. Many of these stations filed checklist applications. With advent of the

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[6]See FCC Public Notices DA99-2605 and DA00-536

[7]FCC Public Notice dated May 1, 2000

CBPA, many of the these stations were then required to file an application to maximize these facilities. Some of these checklist applications have not been processed.[8] This places an undue burden on these licenses who in good faith were going to build facilities based on the Nov. 1, 1999 filing deadline and yet were required to file for yet other facilities. The Commission should find an alternative so that these applications can be treated as separate applications designed to meet different FCC mandates.

Third Issue–Modification of Construction Permits

DTV applications were prepared in good faith based on information regarding a transmitting antenna characteristics, tower space and capacity, etc. However, after receiving a construction permit, it may be found that these initial assessments have changed and a change in antenna, its location, etc. may be required. The FCC should consider permitting these non-allocation altering changes to be handled on FCC Form 302 in lieu of filing for a new modification of construction permit.

Fourth Issue–Modification of Existing NTSC Facilities to Accommodate DTV Facilities

The FCC should alter its processing procedures to permit simple applications in terms of allocation to be "bird applications," i.e., fly right away. This could be defined in terms of

[8]For example, the FCC apparently has defined checklist in very narrow terms thereby eliminating consideration of a station which does not extend its Table B authorized 41 dBu but exceeds the height criteria even though the FCC studied the site for radio frequency field level compliance and a new tower which will alleviate the radio frequency field levels is being delayed due to this processing limitation.

radiation center height or slight relocation of site.[9]

TV Translator/LPTV Translator Program

One of the important aspects noted by the FCC in the Second Notice is the retention of existing translator service and the adoption of the Report and Order in MM Docket No. 00-10. In order to help to achieve this goal, the FCC should release its existing and subsequent translator/LPTV translator evaluation program(s) with attendant data bases, even if not fully developed. This will reduce the computation differences and make the consulting community a partner in this transition period. Further, the Commission should consider permitting existing translator facilities that will be dislodged and service terminated due to displacement by digital television to operate during this implementation phase with vertical polarization only on the same or new channel with a provision that after the transition, its service be restored to horizontal polarization. This will afford that community or areas continued service.

Equivalent TV Facilities

It is found that in order to consolidate TV sites and enhance the ability to implement multiple DTV facilities on a tower, clarification is sought on DTV policy of what evaluation procedure should be used to provide equivalent DTV facilities in over-height situations. For NTSC that procedure is outlined in Section 73.614 of the FCC Rules. To date, no corresponding paragraph is found addressing DTV facilities. If defined, is it in terms of the predicted 41 dBu contour or in terms of a Longley-Rice study of population and area?

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[9]For example, for DTV, the FCC has established a height window and a 5 km site window

Radiofrequency Field Level Assessments

The FCC in ET Docket 93-62 adopted new radiofrequency field level guidelines for controlled and uncontrolled areas. The FCC should permit construction of a new tower by a broadcast license while awaiting its DTV application to be processed by the FCC where the application and the new tower will mitigate radiofrequency field levels and achieve compliance required by the FCC. This will further achieve the goals outlined in the FCC Public Notice dated April 27, 2000 for compliance by September 1, 2000. This will be especially helpful for sites in which can only be constructed in the summer due to weather limitations. This of course presumes that FAA airspace approval has been received and tower registration has been performed.

In order to expedite the implementation of DTV facilities, the FCC may wish to consider to complement its NTSC and DTV antenna data base by requiring that a detailed data base file concerning FM antennas information be created. This should include the number of antenna bays and the FCC Form 302 measured pattern filed with the license application.

Tower Registration

The tower registration requirement is specified in Section 17.4 of the FCC Rules. There arises uncertainty brought about regarding the reconfiguration of any existing tower and primarily tall existing towers supporting existing NTSC facilities. It has been my experience that many of these towers will be reconfigured where there may be an actual reduction in the overall height above ground. These towers now have tower registration numbers. In order to obtain a DTV grant, these station tower owners are required to file a revision to the existing registration

number reflecting the proposed new construction which will result in a lesser tower height. This filing will be in response to the Commission edict that DTV applications be filed by November 1, 1999 and May 1, 2000. However, for a variety of reasons the tower could remain at its present existing higher height configuration for several additional years. Clarification is sought as to how an existing TV station is to make notification and register an existing tower of a lower height that will only occur in the future, perhaps several years from the station receiving its DTV authorization.

In addition, clarification is sought when an existing tower is replaced by a new tower with no change in height or geographic coordinates, whether a new tower registration number is required.

VHF DT Allotments

It appears that under certain instances, the Commission specified a VHF DTV frequency for a UHF existing NTSC operation. The power specified for the VHF DT allotment would only replicate the existing Grade B contour; however, if a UHF channel for the DTV operation had been assigned, a minimum effective radiated power of 50 kW would have been specified in Table B.[10] Therefore, there appears to be an inconsistency in the assignment of a DT effective radiated power on a VHF frequency which does not render the additional "bonus" service area. Secondly, if an existing UHF NTSC operation which has been assigned a VHF DT frequency, can that station consider switching its NTSC operation to the allotted DT VHF frequency and

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[10]*Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Order,"* released December 18, 1998.

placing its DTV operation on its current UHF NTSC frequency? If allowed, clarification is requested with the circumstances where this would be permitted?

Multiple Ownership

The Commission in the *Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Order,* released December 18, 1998 permits the filing of DTV applications with effective radiated powers in the UHF band up to 1000 kW. This will extend the DTV predicted 41 dBu contour well beyond the replicated Grade B service.

Clarification is sought whether or not multiple ownership provisions similar to that contained in Section 73.3555 of the FCC Rules come into consideration if two existing NTSC stations that are in close proximity and make application to increase each of their DTV facilities to the maximum permitted resulting in DTV service overlap.

Interference

In mountainous areas, changes to NTSC or DTV facilities can result in additional interference being predicted. Often, it has been found that new interference component is confined to mountaintops with little or no likelihood that any population of significance resides on the mountaintop areas. However, by virtue of the methodology adopted in MM Docket 87-268 interference assessments are made using uniform population distribution. Clarification is sought as to whether or not the Commission will permit alternate population showings when interference is confined to mountaintop areas using more precise population data. If permitted, under what circumstances?

Site Preemption

The FCC should reassess its position regarding site preemption for displaced NTSC facilities for the establishment of DTV facilities.

AM Station Protection

The FCC appears to be quite properly issuing construction permits for DTV application filing for facilities on existing towers where there is no or little chance that the TV tower's AM electrical characteristics will be modified, that could affect a nearby AM station. However, the FCC routinely is permitting towers for Part 99 facilities to be authorized with no consideration of AM facilities. It is herein requested that FCC policy and procedures be made uniform for all towers regardless of the service with regard to AM facilities.

Protection to FCC Monitoring Facilities

Clarification of the FCC Rules is sought regarding what the protection requirements that must be considered and implemented for DTV facilities for facilities described in Section 73.1030 of the FCC Rules.

Interference and Coverage

ERP, Area and Population listed in Appendix B DTV Table of Allotments are based on Longley-Rice studies using 3-second elevations at 1 km intervals from the television transmitter site. This method of computation misses elevations that would have a great impact on these studies. The FCC should make a determination of the distance interval it deems appropriate and will accept.

Summary

The above is provided in an effort to gain additional insight and guidance and thereby help provide industry the ability to achieve a rapid and seamless transition during the application phase.

Respectfully Submitted,

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Date: May 17, 2000